

Samuel Apoya

MS Student in Computer Science @ UMBC | Founder & CEO @ RiskLens
(207) 660-7961 | sapoya26@colby.edu | LinkedIn | GitHub | Portfolio

EDUCATION

University of Maryland, Baltimore County

MS in Computer Science

Baltimore, MD

Aug. 2026 – Present

Colby College

Bachelor of Arts in Computer Science

Waterville, ME

Aug. 2022 – May 2026

TECHNICAL EXPERTISE

Languages: Python, Java, C++, JavaScript, TypeScript, SQL, Go

Machine Learning: PyTorch, TensorFlow, Hugging Face, Transformers, scikit-learn, NumPy, pandas

Frameworks: FastAPI, Flask, Spring Boot, React, Next.js, Node.js, Django

Databases: PostgreSQL, MySQL, MongoDB, Redis

Cloud & Tools: AWS, Google Cloud, Azure, Docker, Git, Linux, GitHub Actions, CI/CD

EXPERIENCE

Software Engineering Intern

Oct. 2024 – May 2025

Davis Institute for Artificial Intelligence

Waterville, ME

- Built backend services in Java and MySQL on AWS for an internal NLP research platform supporting concurrent model workloads.
- Added Redis caching and connection pooling, reducing p95 latency by 12%.
- Improved transformer metadata queries through SQL indexing and batching; added structured logging and tracing to diagnose async worker bottlenecks.
- Designed REST APIs with OpenAPI and implemented Docker-based CI/CD, reducing deployment time by 50%+.

Research Assistant – MLArtProject

May 2025 – Present

Insite Lab, Colby College

Waterville, ME

- Built a conversational AI platform for blind and low-vision museum visitors using React, Node.js, MongoDB, and OpenAI API.
- Implemented versioned chat sessions, secure image uploads, backend REST APIs, and integration tests.
- Added event logging and tracing to study user interaction flows and improve reliability across AI-assisted museum experiences.

Teaching Assistant

Feb. 2023 – Present

Colby College Computer Science Department

Waterville, ME

- Mentored students in Object-Oriented Design and Data Structures on design patterns, concurrency, algorithms, and debugging.
- Supported 200+ students across multiple semesters through weekly office hours, code reviews, and project troubleshooting.

PROJECTS

RiskLens | *FastAPI, Next.js, PostgreSQL, Docker*

2026 – Present

- Built RiskLens, an AI-powered portfolio risk platform for institutional-grade portfolio analytics, stress testing, and loss forecasting.
- Built backend services, REST APIs, and financial data pipelines using FastAPI and PostgreSQL to support portfolio analytics and real-time risk monitoring.
- Built an AI risk analysis agent that uses backend analytics tools to monitor portfolio risk, run stress tests, and generate explainable investment risk summaries.
- Developed interactive dashboards with Next.js and TypeScript to visualize portfolio risk attribution and risk alerts.

CineRank | *PyTorch*

2026

- Built CineRank, a neural movie recommendation system that learns user and movie embeddings for personalized top-k ranking.
- Trained a PyTorch collaborative filtering model using ratings and movie metadata to improve recommendations for sparse users.
- Built a retrieval and ranking pipeline with offline evaluation using Precision@K, Recall@K, and NDCG@K.
- Developed FastAPI endpoints for personalized recommendations, similar-movie search, and user feedback collection.

QCare – Real-Time Hospital Wait-Time Prediction | *FastAPI, TensorFlow, MySQL*

Fall 2024

- Built a real-time hospital wait-time prediction platform using FastAPI and TensorFlow to estimate emergency department wait times.
- Improved performance under concurrent load with indexed MySQL queries, caching, async workers, and structured logging.

LEADERSHIP

President

Sep. 2024 – Present

Colby Hackers

Waterville, ME

- Organized ML and cloud-focused workshops, mentoring 10+ teams from idea to working prototype.
- Led planning and execution of a campus-wide hackathon with 60+ participants.